



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/578,479

05/08/2006

Ilya Fine

FINE8

9447

1444 7590 09/29/2009
BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER

WINAKUR, ERIC FRANK

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

09/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,479	Applicant(s) FINE ET AL.	
	Examiner Eric F. Winakur	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/2/07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 1 and 30 are objected to because of the following informalities: in claim 1, line 19, the letter "d" should be deleted. In claim 30, line 19, it appears that the term "response" should read "responsive". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 30, 31, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Fine (US 6,400,972 - cited by Applicant). Fine teaches a pressurizing assembly 12 (Fig. 1 of Fine), a measuring probe 1 (Fig. 1 of Fine), a source of external electromagnetic field 5 (Fig. 1 of Fine), a detecting module 8 (Fig. 1 of Fine), and a control unit 16 (Fig. 1 of Fine) that includes storage, data acquisition and processing utilities (column 8, lines 21- 46 of Fine).

4. Claims 30, 31, and 38 - 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Fine (USPN 6,587,704 - cited by Applicant). Fine teaches a pressurizing

Art Unit: 3768

assembly 2A, a probe 3, a source of an external electromagnetic field 3A, a detecting module 3B, and a control unit 4 that includes a memory 4A and processor 4B. (Fig. 1 of Fine). In regard to claims 38 - 39, asymptotic magnitudes are disclosed. (column 6, lines 37-63 of Fine). In regard to claims 40 - 42, parametric slopes are disclosed. (column 11, lines 57-67 to column 13, line 65 of Fine).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. Claims 1, 3, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al. (cited by Applicant). Shimizu teaches creating a condition of artificial blood kinetics using a cuff (Abstract of Shimizu), applying an external electromagnetic field by using an impedance measuring device (column 5, line 10 to column 6, line 3 of Shimizu), and detecting a time response of the medium and generating measured data (Figs. 2A-2B of Shimizu).

6. Claims 1 - 7, 9, 17 - 19, 30, 31, and 36 - 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Ruben et al. (cited by Applicant). Ruben teaches creating a condition of artificial blood kinetics using a cuff (Fig. 9 of Ruben), applying an external electromagnetic field by using an impedance measuring device (Abstract of Ruben), and detecting a time response of the medium and generating measured data (column

Art Unit: 3768

11, lines 16-27 of Ruben). Further, a neural network is used. (column 12, lines 18-30 of Ruben) and Ruben teaches a pressurizing assembly (Fig. 9 of Ruben), a probe with electrodes (Fig. 4 of Ruben), and a control unit (Fig. 4 of Ruben).

7. Claims 1, 3, and 19 - 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Oppelt et al. (cited by Applicant). Oppelt teaches creating a condition of artificial blood kinetics using a pressure spring 2, applying light from light sources 8, detecting a time response of the medium by a piezoelectric transducer 7a, and generating measured data. (Fig. 5 and column 8, lines 1-52 of Oppelt). Further, two pressure pulses are used. (Abstract and column 8, lines 1-52 of Oppelt) and glucose is determined. (column 9, lines 14-23 of Oppelt).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 30, 31, 37, 38, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dias et al. (cited by Applicant) in view of Cooper et al. (cited by Applicant) and Clark et al. (cited by Applicant). Dias discloses a system that includes a pressurizing assembly (cuff 51 and tube 52 in Figs. 3A-3B of Dias), a source of an external electromagnetic field (light source 23 in Figs. 3A-3B of Dias), and a detecting module (sensor 25 in Figs. 3A- 3B of Dias). Dias discloses that the techniques of US. Patent 4,975,581 to Robinson et al. (Robinson) can be used. (column 4, lines 23-39 of

Art Unit: 3768

Dias). Robinson teaches the use of a computer 121 (Fig. 5 of Robinson), which includes a memory, data acquisition, and processing unit (column 10, line 19 to column 11, line 26 of Robinson). Dias teaches that known blood samples are used to create a calibration model but does not teach whose blood samples to use. Cooper teaches using taking calibration sample from the particular individual (Abstract of Cooper) who uses the measurement device, which would fulfill the requirements of providing samples as set forth in Dias. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use calibration samples from the particular individual using the measurement as disclosed by Cooper since Dias teaches the use of the known blood samples to create a calibration model and Cooper teaches such calibration samples. Dias teaches the inflation and deflation of a pressure cuff (Figs. 3A-3B of Dias) but does not teach how the pressure is controlled. Clark teaches a pump driver 70 (Fig. 2 of Clark) that would fulfill the requirements of providing a means for controlling pressure as required by the combination. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the pump drive of Clark in the combination since a means for controlling pressure is required and Clark teaches such means. A pressure cuff 51 is disclosed. (Fig. 3A-3B of Dias) and glucose is detected.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

Art Unit: 3768

from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1 - 43 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 35 of U.S. Patent No. 7,020,506. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are broader than those of the patent. Thus, any apparatus or method meeting the limitations of the claims of the patent would necessarily meet those of the instant application.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited by Applicant have been reviewed. The prior art does not teach or suggest that "said certain moment is chosen when the response attains its near asymptotic magnitude" in combination with the other limitations of claims 8 or 10. The prior art does not teach or suggest that "said characteristic parameter is a parametric slope as a ratio between a first function depending on a time response of the medium corresponding to a first frequency of the external electromagnetic field and a

Art Unit: 3768

second function depending on the time response of the medium corresponding to a second frequency." in combination with the other limitations of claims 11 or 12. In regard to claim 32, the prior art does not teach or suggest that "said pressurizing assembly further includes a secondary occlusion cuff" in combination with the other limitations of claim 32. The prior art does not teach or suggest that "said measuring probe includes a photo-acoustic system, where said source of the external electromagnetic field being configured for generating a light beam in the wavelength range where the scattering or absorbing properties of the patients blood are sensitive to provide an acoustic response and where said detecting module is an acoustic detector" in combination with the other limitations of claim 34 or that the measuring probe "includes a photo-acoustic system and an optical system" in combination with the other elements of claim 35.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric F. Winakur whose telephone number is 571/272-4736. The examiner can normally be reached on M-Th, 7:30-5; alternate Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571/272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/
Primary Examiner, Art Unit 3768